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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,028	08/15/2001	Markku Verkama	P279295	9392
909	7590	01/10/2005	EXAMINER	
PILLSBURY WINTHROP, LLP P.O. BOX 10500 MCLEAN, VA 22102			IQBAL, KHAWAR	
			ART UNIT	PAPER NUMBER
			2686	

DATE MAILED: 01/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/830,028

Applicant(s)

VERKAMA, MARKKU

Examiner

Khawar Iqbal

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2,4-12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mony (6009383) and further in view of Watanabe et al (5991642).

3. Regarding claim 1 Mony teaches a digital telecommunication system comprising (figs. 1,3,5,6):

a first center (40) configured to enable speech communication between a plurality of terminals (1, 1'), the first center being (49) associated with a calling terminal (1) and including a first transcoder (18) unit (col.6, lines 14-30);

a second center (40') that is configured to enable speech communication between a plurality of terminals (1,1'), the second centre (40') being associated with a called terminal (1') and including a second transcoder unit (18') (col. 6, lines 14-30),

wherein the first and second transcoder units each include speech codecs (18,18'), and each of the terminals comprises one or more speech codecs, the terminals being arranged to provide information regarding the supported one or more speech codecs to their associated switching centers (40) (col. 6, lines 14-35, col. 7, lines 20-51);

Art Unit: 2686

the first centre (40) is configured to perform handshaking with the second center (40'), the handshaking including indication of the speech codecs supported by the calling terminal (col. 6, lines 14-30) wherein at least one of the first (40) and second (40') centres is configured the speech codec used by the calling (1) and called terminals (1') (col. 6, lines 14-35, col. 7, lines 20-51), and wherein at least one of the first (40) and (40') second centres is configured to establish call connections that bypass one or more of the transcoder units or to control the transcoder units to transmit encoded speech between the called and calling terminals without performing speech encoding operations so that speech is encoded (11) and decoded (11') only in the terminals (col. 6, lines 14-43, col. 3, lines 53-60, col. 5, line 58). Momy teaches the communication protocol lets the two ends of the communication path to determine whether they should communicate in PCM mode, when one terminal is analog and the other digital, or forgo the conversion from compressed speech to PCM to let the encoder in one terminal talk directly to the decoder of the other terminal in a digital-to-digital connection (mobile-to-mobile and mobile-to-land). VSN 60 also comprises a speech codec 18' including VSELP decoder 56 and VSELP encoder 57, which are inserted in the path of the incoming and outgoing signal, respectively, according to the mode of operation in codec bypass or PCM mode. Selection of the mode of operation is figuratively shown using A/D detector 108' and switch 104'. Momy does not specifically (clearly) teach wherein at least one of the first and second centres is configured to choose the speech codec used commonly by the calling and called terminals.

In an analogous art, Watanabe et al wherein at least one of the first and second centres is configured to choose the speech codec used commonly by the calling and called terminals (col. 10, lines 20-49). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Mony by specifically adding feature configured to choose the speech codec used commonly by the calling and called terminals in order to enhance switching of communication channels using optimum voice coding system can be made smoothly.

Regarding claim 2 Mony teaches wherein the telecommunication system is a mobile communication system (fig. 3) in which the terminals include mobile stations (1,1'), and the telecommunication system further comprises a mobile communication network and at least one of the first (40) and second (40') centres is a mobile switching center (col. 5, lines 28-48).

Regarding claim 4 Mony teaches wherein the handshaking is performed as outband signaling (col. 6, lines 14-35).

Regarding claim 5 Mony teaches wherein the first and second centres are configured to perform the handshaking in association with a routing information inquiry issued in response to a determination that the called terminal is a mobile subscriber (col. 8, line 60-col. 9, line 7).

Regarding claim 6,7 Mony teaches the first center is configured to send the routing information inquiry including information associated with the speed coded sported by the calling terminal (col. 6, lines 14-30, col. 8, line 60-col. 9, line 7, col. 4, lines 39-49).

Regarding claim 8 Mony teaches wherein the first and second centres are configured to perform the handshaking in association with inter-MSC signaling (col. 6, lines 14-30, col. 7, lines 30-52).

Regarding claim 9 Mony teaches the first centre is configured to send a message requesting connection set-up, the message including information indicating, the speech codecs supported by the calling terminal (col. 6, lines 14-30), the second centre is configured to select a speech codec associated with the call connection which both the called and calling terminals are configured to support, and the second centre is configured to send information associated with the codec associated with the call connection, in a reply message to the connection set-up message (col. 6, lines 14-30, col. 7, lines 30-52).

Regarding claims 10,11 Mony teaches wherein, when required, at least one of the first and second centre is configured to notify the associated of the speech codec it has to use as the result of the handshaking (col. 6, lines 14-30, col. 7, lines 30-52).

Regarding claim 12 Mony teaches wherein a pulse code modulated digital link exists between the first and second centres, and the first and second centres are configured to control their respective transcoder units to adapt an encoded speech signal to one or more least significant bits of PCM samples without transcoding (col. 6, lines 14-30, col. 7, lines 30-52).

Regarding claim 14 Mony teaches a centre in a digital telecommunication network configured to receive information regarding supported one or more speech

Art Unit: 2686

codecs of a calling terminal and connect a transcoder located in a transcoder unit to a call connection when required, wherein:

the centre is configured to perform handshaking with another centre associated with a called terminal, the handshaking including indication of speech codecs supported by the calling terminal associated with the centre, the centre also being configured to choose the speech codec used by the terminals (col. 6, lines 14-35, col. 7, lines 20-51), and the centre is configured to connect a call connection that bypasses the transcoder unit or to control the transcoder unit to transmit the encoded speech without performing speech encoding operations in such a way that speech encoding and decoding are only performed in the calling or called terminal (col. 6, lines 14-43, col. 3, lines 53-60, col. 5, line 58). Mony teaches the communication protocol lets the two ends of the communication path to determine whether they should communicate in PCM mode, when one terminal is analog and the other digital, or forgo the conversion from compressed speech to PCM to let the encoder in one terminal talk directly to the decoder of the other terminal in a digital-to-digital connection (mobile-to-mobile and mobile-to-land). VSN 60 also comprises a speech codec 18' including VSELP decoder 56 and VSELP encoder 57, which are inserted in the path of the incoming and outgoing signal, respectively, according to the mode of operation in codec bypass or PCM mode. Selection of the mode of operation is figuratively shown using A/D detector 108' and switch 104'. Mony does not specifically (clearly) teach wherein at least one of the first and second centers is configured to choose the speech codec used commonly by the calling and called terminals.

Art Unit: 2686

In an analogous art, Watanabe et al wherein at least one of the first and second centres is configured to choose the speech codec used commonly by the calling and called terminals (col. 10, lines 20-49). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Mony by specifically adding feature configured to choose the speech codec used commonly by the calling and called terminals in order to enhance switching of communication channels using optimum voice coding system can be made smoothly.

4. Claims 3,13,15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mony (6009383) and further in view of Watanabe et al (5991642) and Valentine et al (6600740).

Regarding claims 3,13,15-17 Mony teaches voice service node serving wireless speech terminal coupled to mobile switching center MSC, speech codec, speech recognizer and bypass unit exchanging messages with remote bypass unit at MSC. For providing a voice service node serving a wireless speech terminal coupled to a mobile switching center comprising a bypass unit, a speech codec and a speech recognizer. Mony and Watanabe et al do not specifically teach MSC signaling is ISUP, setup is an IAM and ANM message and packet switched link.

In an analogous art, Valentine et al teaches MSC signaling is ISUP, setup is an IAM (IAM message) and ANM message (backwards messages) (col. 6, line 59-col. 7, line 25) and packet switched link (col. 6, line 11-15). Transmitter generates signal identifying the originating encoding algorithm used by the originating codec for encoding an input signal. Processor analyzes encoding artifacts detected in the

Art Unit: 2686

encoding signal, after processing the encoding algorithm identification signal and applies analysis in conjunction with the encoding algorithm to reconstruct the input signal. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Mony and Watanabe et al by specifically adding feature the reply message to the connection set-up message is an ANM, IAM message according to ISUP signaling in order to enhance system performance Improves voice quality by using an encoding algorithm better matching the decoding algorithm and realizes improved voice communication as taught by Valentine et al.

Response to Arguments

5. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAWAR IQBAL whose telephone number is 703-306-3015.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **BANKS-HAROLD, MARSHA**, can be reached at 703-305-4379.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Art Unit: 2686


or faxed to:

(703) 872-9314 (for Technology Center 2684 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Khawar Iqbal


RAFAEL PEREZ-GUTIERREZ
PATENT EXAMINER
1/10/05